ABSTRACT OF THE DISCLOSURE

A method of making a membrane electrode assembly is provided. The method includes providing a non-porous polymeric substrate which has sufficient structural integrity and elastic deformation such that no significant deformations occur during processing to facilitate reuse. The substrate is optionally formed into a loop for continuous processing. A slurry is formed which includes an ionically conductive material, an electrically conductive material, a catalyst, and a high boiling point solvent. The slurry is applied onto the non-porous polymeric substrate, for example, in a pattern of discrete regions. The slurry is dried to form decals. The decals are bonded to a membrane and then the substrate is peeled from the decal in a substantially undamaged condition so that it may be reused.